武汉建恒工业技术有限公司
Wuhan Jianheng Industrial Technology Co.,Ltd.

Wear Resistant Castings by Lost Foam Process

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Brief introduction:

Wuhan Jianheng industrial technology Co.,Ltd is an integrated service company committed to the development of foundry industry. The company owns a team with professional knowledge and rich practical experience in casting technology and management, engaging a number of senior foundry experts as consultant; the company will strive to become a modern service industry enterprises focusing on foundry consulting, research, technology, production, supplyment, trade, human resources and other service.

Lost foam process have been widely used in many foundries and getting good performance for many kinds of castings. This process is also been widely used for production of wear parts especially for those which have smaller size but with many different kind of types. If use this process for right castings, the production cost will be greatly reduced and the casting quality will be enough for all kinds of working conditions.

Ⅰ Introduction & typical products

Hammer: all kinds of hammer with 13% Mn or 18% Mn, usually weight is less than 50kg;

Blow bar: smaller size blow bar, with 20% and 26% Cr content;

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Ⅰ Introduction & typical products

All kinds of lining plate:

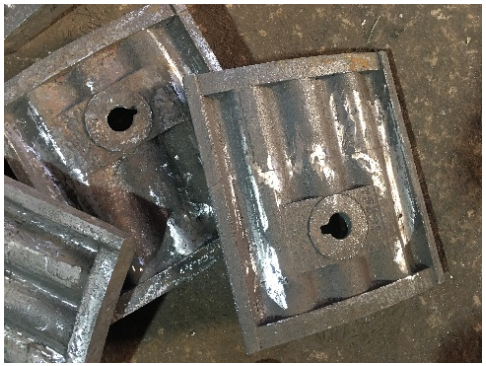
Including many kinds of lining plate made by manganese steel and high chrome iron material.

13% Mn, 18% Mn;

20% Cr, 26% Cr;

Alloy steel;

Alloy cast iron;



Ⅰ Introduction & typical products

Others: heat resistant castings; some special shape castings which is difficult to produce by sand casting process, etc;

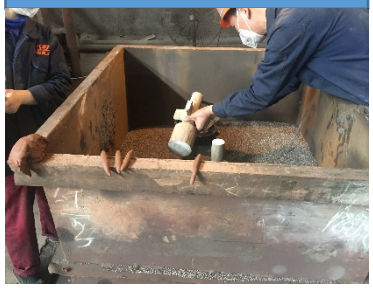
Ⅱ What is Lost foam casting?

White foam making

Foam assembling

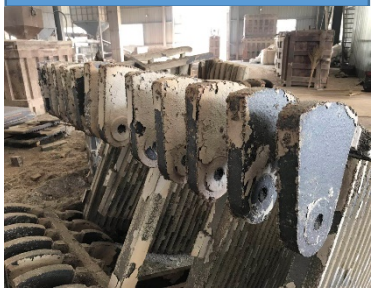
Coating & drying

Molding



Pouring

Shake out



Cleaning

Other process

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Ⅲ How it works:

3.1 White foam making

Manual cutting

Automatic cutting machine

Foam machine

Manual cutting: for small quantity and simple shape castings;

Automatic cutting: for more complex shape castings;

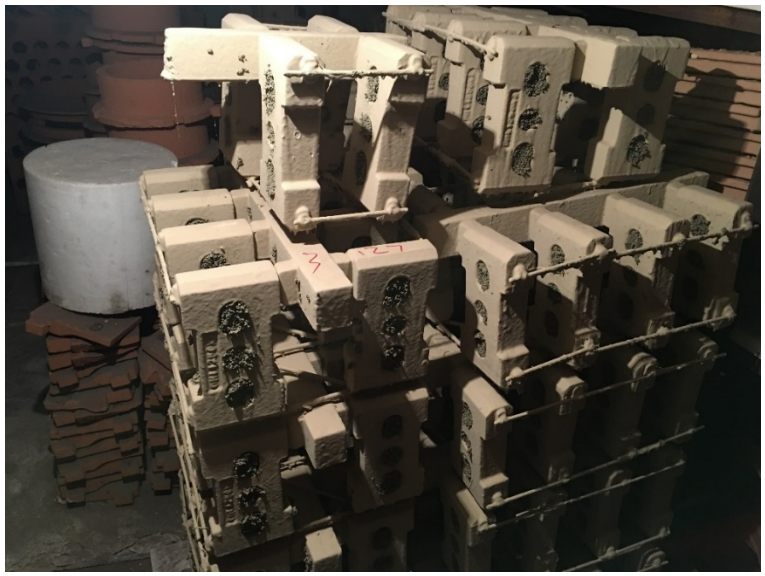
Foam machine: use special pattern for big quantity castings or for high requirement castings;

3.2 Foam checking & assembling

For complex castings usually use different foam sheets,meanwhile assembling gating system togather,assisted by wood strips and asbestos sheets under glue;

3.3 Dip-Coating & drying

The whole foam need be coated 2~3 times ,and dryed in special heating room to get good coating layer, for every coating layer, the heating will be important.



3.4 Molding & Pouring

Molding: we use dry sand for molding, and the sand will be reused after shakeout, no any binder and chemical agents; when molding, sand will be filled by several times and assisted by vibrating; we also use ceramic sand instead of silica sand or olivine sand;

Pouring will be under suitable parameters: Vacuum pressure, pouring time and temperature.

3.5 Shaking out

Due to the use of dry sand, it is only necessary to tilt the flask to pour the casting out of the flask. The recovery rate of sand is greatly improved.

IV Advantage of lost foam casting

1) Low investment;

2) No need to develop wood patterns (Especially for small batch products);

3) High production efficiency, low cost, low labor strength;

4) Good surface quality, no parting line;

5) More environmentally friendly.

Low waste and noise;

Low energy and simple flow for sand circulation;

Ⅴ. Typical simple equipment

1）Production efficiency: 3-5 mold/h;

2）Lower investment cost;

3）More flexible production;

武汉建恒工业技术有限公司
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For small wear resistant castings, our service including:

1. Basic casting technique consulting and data analysis;
2. Plant and shop layout designing and implement;
3. Equipment designing and selection;
4. Foundry materials selection and using guidence ;
5. Casting defects analyze and solution;
6. Workers training and operation guidance;
7. Guidance and advice on production control and management
8. Supply for any necessary equipment and material.

We will offer whole support for the project till the production stable

For more information please visit: *www.jianhengid.com*

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